

BIBLIOGRAPHICAL NOTICES.

A History of British Ferns and Allied Plants. By Edward Newman, F.L.S., Z.S., &c. 8vo. London: J. Van Voorst, 1844.

WE had delayed noticing this elaborate work in the hope of having had it in our power to study some of the controverted plants described in it in their native localities; as however fortune has not favoured us in that respect, not having seen those which we most desired to investigate during any portion of an extensive summer tour, we are compelled to sit down with dried specimens alone before us to examine, with their aid and that of our previous observation, into the correctness of the conclusions at which Mr. Newman has arrived. Before however we commence, it is a great gratification to have it in our power most cordially to recommend the work to all those who desire to obtain a knowledge of British Ferns, as one which, in accuracy of observation, elaborateness and clearness of description, and beauty of illustration, does not possess its equal.

The numerous and considerable changes in nomenclature and in the rank awarded to many of our ferns in Mr. Newman's former work under the above title, and the very considerable alteration which he has again made in those respects in that now before us, which differs so much from its predecessor as deservedly to claim to be considered as a distinct work rather than an edition, have rendered it difficult and somewhat presumptuous in us to venture an opinion upon them; as however we learn that such a review is expected, and editors are always supposed to know all about whatever may come under their critical eye, and that we feel that we really do know something concerning the subject now under consideration, we shall proceed boldly to the examination of the contents of Mr. Newman's book in the order in which he has arranged them. It seems to us that such a review is far more desirable in the present case than a connected dissertation upon our native ferns, such as has been suggested to us, than in short a history of British ferns by us, and not an examination of that by Mr. Newman.

We commence with the *Equisetaceæ*, including the genus *Equisetum* alone, where two difficult questions occur: first, as to the distinctness of the plants named *hyemale*, *Mackaii* (*elongatum*, Hook.), and *variegatum*; and secondly, concerning the nomenclature of the other species. On the former of these subjects Mr. Newman has collected together an immense mass of evidence, and we think that he has clearly shown that three at least are distinct species. It is nevertheless very difficult to draw up such a character upon paper as shall always suffice for their discrimination, most if not all their distinctions being liable to considerable variation, and probably the colour of the sheaths is that upon which most reliance may be placed. The shape of the teeth which terminate the sheaths is far from constant. Our author has clearly shown that *E. Mackaii* (Newm.) is not the same as *E. elongatum* (Willd.), a plant apparently identical with the *E. ramosissimum* (Desf.), and has therefore con-

ferred a new name upon the Irish species in compliment to Mr. Mackay, the distinguished investigator of Irish botany, whom he had been led to consider as its original discoverer; it now however appears that it was detected by the late Mr. Templeton long previously to its attracting the notice of Messrs. Whitla and Mackay, and ought therefore, according to the rules for correct nomenclature, to be called *Mackaiana* in place of *Mackaii*. It should however be observed that Vaucher, although quoting Willdenow's *E. elongatum* as a probable synonym of *E. ramosissimum* (Desf.), in which doubtless he is correct as far as the European localities are concerned, describes and figures another species as *E. elongatum* (Willd.), to which he refers the extra-European stations recorded by that botanist. This latter plant very closely resembles *E. Mackaii*, and is perhaps what Sir W. J. Hooker had in view when conferring the name of *E. elongatum* upon the Irish specimens; it is however quite distinct, as may be seen by comparing Vaucher's description and figure with our plant. We suspect that several species will ultimately be found to be included under the name of *E. variegatum*, although sufficient data have not as yet been obtained to allow of their separation upon paper. The upright aquatic plant which has now been observed in many places presents a very different appearance from the prostrate inhabitant of loose and dry sands, and Mr. Moore has found them to continue distinct in that respect, even when cultivated in a precisely similar manner. It would appear that the name of *variegatum* belongs by right to the plant of freshwater marshes, having been first employed for a described plant by Weber and Mohr in 1807. If our sea-shore plant, the *E. variegatum* of Smith, should prove distinct, the excellent name of *arenarium* is already provided for it. There is still another plant which may ultimately be separated from this species which was found by Mr. W. Wilson in the lake at Mucruss near Killarney; this is upright, tall and stout, has a much smoother stem, and apparently a differently shaped internal hollow. We have not seen it, but should it prove distinct from the true *E. variegatum* of fresh water, it will justly claim the appellation of *E. Wilsoni* conferred upon it by Mr. Newman.

Concerning the specific distinctness of the remaining species of *Equisetum* there appears to be no difference of opinion; not so upon their names. The *E. limosum* of English authors is called *fluviatile* by Newman, considering the *limosum* and *fluviatile* of Linnæus as only varieties of the same species, and in this he is borne out by the Linnæan herbarium. Indeed we have no doubt that the *E. limosum* (Sm.) is the original *E. fluviatile* (Linn.), but it seems equally certain that Linnæus afterwards included *E. Telmateia* (Ehrh.) under that name, for he says (Mant. ii. 504) of *E. fluviatile*, "caules floriferi a sterilibus distincti, ut *E. arvensis*, Hall." We ought not to wonder that Sir J. E. Smith was misled by the adoption by Linnæus of Haller's observation as applicable to his species, when we consider how little the Linnæan specific character affords upon which to found an opinion, and that the specimens in his herbarium might well have been misnamed. We now find that the specimens named *E. fluviatile*

in the old Swedish herbaria are all the *limosum* of Smith, and this corresponding with the Linnæan herbarium and not disagreeing with his specific characters, but only with a note in the second Mantissa, a work of but little authority, appears to afford conclusive reasons for reverting to the Linnæan name which has always been thus employed by those authors who looked to Sweden for evidence and not to Smith's 'Flora Britannica.' Before proceeding we may state that Fries distinguishes the two Linnæan plants, saying of *E. limosum*, "ramulis vagis lævibus vaginis viridi-dentatis," and of *E. fluviatile*, "vaginis ramul. atris" (Fl. Scan. 155); he considers both of them as more or less constantly branching, nor can we agree with Newman's observation (at page 7) that the *limosum* (Linn.) never branches. At that page he separates the unbranched form of the British *E. limosum* from *E. fluviatile*, but does not characterize it, only stating, we think incorrectly, that it "never, under any circumstances, becomes branched." Should the plants be really different, a character may perhaps be found in the presence of a furrow (division of the rib according to Newman) on the back of the teeth of the sheaths of *E. fluviatile*, and its absence from those of *E. limosum*.

The change of name which we have just noticed obliges us to adopt another for the *E. fluviatile* of Smith, and as Ehrhart's *E. Telmateia* is undoubtedly the oldest, it is of course the one to be employed. The name also of *E. umbrosum* must necessarily be adopted in place of *E. Drummondii*, it having the claim of antiquity in its favour.

Lomaria Spicant (Desv.).—This is the *Blechnum boreale* of our authors, and appears to us not to agree well with either of those genera, but we think with Sir W. J. Hooker that it is more nearly allied to *Blechnum* than to *Lomaria*.

Woodsia ilvensis and *W. alpina* (Newm.) we must confess ourselves to be unable to distinguish from each other, although the fronds figured by Mr. Newman are very different. If they should prove distinct, it would appear that he is correct in changing the name of *hyperborea* for that of *alpina*, Bolton having been its earliest describer.

Cystopteris montana is a most interesting addition to our native ferns. It was found by Mr. W. Wilson on Ben Lawers.

We quite concur in the adoption of Roth's genus *Polysticum* for the *Aspidium Lonchitis* and its allies. After a careful study of the plants denominated *A. aculeatum*, *lobatum* and *angulare*, a considerable change has been brought about in our views, which now accord with those of Mr. Newman and many continental botanists who think that the former two are one species, from which the *angulare* is distinct. The oblique base of the decurrent pinnules in the former contrasts well with the truncate base of the distinctly stalked pinnules of the latter. Still we must confess that lingering doubts remain, since we occasionally find in some specimens of *aculeatum* pinnules approaching very nearly in form and mode of attachment to those of *angulare*.

Lastræa.—Some of the species included in this genus, in the al-

teration of the name of which from *Aspidium* we fully concur, present considerable difficulty, and it will be found that Mr. Newman has totally altered his views concerning them, distinguishing three species (*spinosa*, *multiflora* and *recurva*) where he only allowed one (*dilatata*) in his former work. He deserves very great credit for acuteness in detecting characters by which these three plants are distinguishable, and which, as far as our limited observation extends, appear to be permanent. We refer to the form of the scales clothing the lower part of the stem, by attending to which, as figured at page 214 of Mr. Newman's work, it appears almost certain that perfect individuals of the plants may always be distinguished. The subject of their nomenclature presents far greater difficulty. *L. spinosum* (Newm.) is considered by our author as different from *Asp. spinulosum* (Swartz), and it is singular and unfortunate that authentic specimens from that author, both of this and also of *A. dilatatum*, should be wanting in England. We possess two specimens of a fern from different parts of Germany and from different botanists, and also an imperfect one from the Vosges mountains in France, named *A. spinulosum* (Sw.), which are certainly the *L. spinosa* (Newm.), but, as most authors state that the true plant of Swartz has stalked glands upon the edge of its indusium, it is probable that they are wrongly named, and that Roth's *Polys. spinosum* is the oldest certain name for this species. The same difficulty attends the *L. multiflora* (Newm.), which appears certainly to be the plant of Roth, but scarcely determinable in other respects. We possess it under the name of *Asp. dilatatum* (Sw.) in Durieu's Asturian Collection (no. 153), but have not seen German specimens, and the absence of the requisite materials prevents us from forming an opinion concerning its identity with the *Polys. dilatatum* (Hoffm.), or the relative claims of Hoffmann and Roth as its first describers. The third plant to which we have referred, the *L. recurva* (Newm.), is, we now think, a good species. We possess Scottish specimens from Tobermory in the Isle of Mull, thus proving it to exist in that country as well as in England and Ireland, but did not observe it during a recent tour in the south-west of Scotland. Agreeing with our author in considering it as a species, we have to complain greatly of its name. A worse could not have been selected, as it conveys a totally wrong idea of the character of the frond, the whole and every part of which is more or less *incurved* (the edges turning upwards), never *recurved* or turned downwards; Mr. Babington's manuscript name of *concauum* (under which denomination many specimens have been distributed by him) conveys a far better idea of the plant. There is great reason to hope that the name of *dumetorum* may be retained for this plant, although the specimens preserved in Smith's herbarium under that denomination do not agree with it. It is nevertheless the opinion, we believe, of our older botanists, who were well acquainted with Smith's plants, that the present species was included by him under his *A. dumetorum*; should not this be the case, we have Mr. Newman's own admission that it is the *A. dumetorum* of Mackay, and as Smith's name would drop, that becomes the

oldest *specific* name, and ought perhaps to be employed under any circumstances; but we would certainly admit very little proof as sufficient for the dismissal of so incorrect a name as *recurva*.

Athyrium filix-femina.—The account of this plant is well deserving of careful study, as we suspect that the plant named *A. rhaticum* by Roth will be found to be a distinct species.

It appears to be highly probable that *Trichomanes speciosum* is identical with *T. radicans*, as stated by Sir W. J. Hooker in his 'Species Filicum'; indeed his series of specimens is so perfect, that it is hardly possible to come to any other conclusion. That our plant is the *T. speciosum* (Willd.) is certain, and we also feel quite convinced that the supposed new species named *T. Andrewsii* by Newman is only one of its forms.

We have been considerably amused by observing the credit which our author takes to himself for his figures of our two *Hymenophylla*, that of *H. Wilsoni* appearing to us to be by far the most unsatisfactory figure contained in his book.

Having now occupied so much space, we cannot enter upon the consideration of the many valuable observations contained in other parts of the work before us, but protest against an endeavour made in the Synopsis, the last written part although the commencement of the book, to change two known and recognised generic names solely because they were originally employed specifically for the plants upon which the genera are founded; *Scolopendrium* Mr. Newman would change into *Phyllitis*, and *Ceterach* into *Notolepeum*. He would also separate *Asplenium septentrionale*, *germanicum* and *rutamuraria* from that genus, and give them the name of *Amesium*. We doubt if the want of a distinct mid vein to the ultimate divisions is a sufficient reason for the formation of a new genus.

In conclusion we again compliment Mr. Newman upon the excellent book which he has produced, one which must find its way into the hands of all botanists, who cannot fail to be struck with the great powers of discrimination, accuracy of description, and critical acumen of its author. In beauty of illustration also it is a worthy companion to the elegant and valuable series of works on British Natural History which have been published by Mr. Van Voorst.

Faune Ornithologique de la Sicile. Par Alfred Malherbe. 8vo. Metz, 1843. Pp. 242.

This valuable contribution to the zoology of Southern Europe is an extract, published as a separate volume, from the 'Mémoires de l'Académie Royale de Metz.' After a brief *résumé* of the numerous subjects of interest which Sicily presents to the historian, the antiquarian, the geologist, the botanist and the zoologist, the author proceeds to the especial object of his treatise. He enumerates no less than 318 species of Sicilian birds, a number which might surprise us, did we not consider that Sicily, from its intermediate position between Europe and Africa, is resorted to by many species of birds